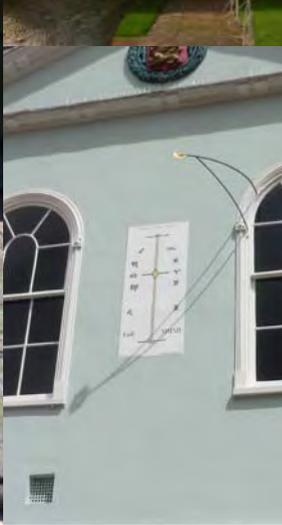
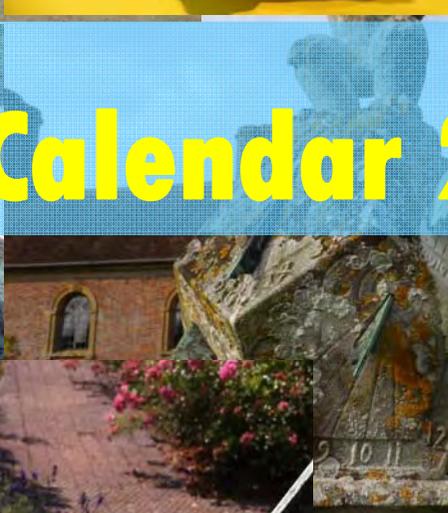




The SunInfo Calendar 2014



Telling Clock Time from a Sundial

When standing in sunshine in front of an interesting dial it's always of interest to see if displayed solar time is at all accurate. Three things contribute to the difference between the time shown on a sundial and that shown on a watch. These are:

- 1. The Equation of Time.** This is the daily variation caused by the fact that the earth's orbit around the sun is not circular and its axis is tilted. This correction is shown as watch slow or fast in the small table on each calendar page.
- 2. The Effect of Latitude.** The sun is overhead at Greenwich much earlier than it is in Penzance. The correction needed for this is fixed for any dial in one location and is equal to 4 minutes for every degree of Longitude of the dial's location East or West of Greenwich. The table on the right allows an estimation of this correction to be made from a road map. See below for more details.
- 3. Summer or Daylight Saving Time.** This is the shift of one hour that is applied in Summer. Watches are faster than sundials by one hour during summer when Summertime is in force. In 2014 British Summer Time begins on Sunday, March 30 at 1am and ends on Sunday, October 26 at 2am.

An approximate way to determine the Longitude correction for anywhere in the British Isles

The table on the right lists a number of towns across the British Isles together with their approximate differences of solar time from Greenwich. Because so many simple or alphabetical lists of towns can be hard to search in order to find one near you, let alone find the one that is nearest to you, this list is arranged in ascending order of latitude. It groups together all towns at a similar latitude so that you can more easily find the one or ones near where you might be. This grouping has the additional advantage that within such a list can also be included a very approximate rule of thumb about converting East-West distances to seconds of time at that latitude.

Armed with this simple table (and a road map) it is possible to make a reasonably swift estimate of the longitude correction that should be applied to a particular EoT-corrected reading of solar time for anywhere in the British Isles.

Let's assume that we are standing over the dial in the churchyard at Toller Whelme, Dorset. A swift measurement of your road map shows it is about 38 miles due East of Exeter. Using the stated 5 secs per mile correction applicable at that latitude that means the sun is overhead at Toller Whelme some 3m 10s earlier than at Exeter. Subtracting this from the tabled correction for Exeter, in turn implies a dial longitude correction of 11m 4 secs. The correct figure is 10m 45s – only some 20 seconds different.

England & Wales

Allow 5 secs per mile E-W from here in the list

Penzance	22m 9s slow
Plymouth	16m 42s slow
Bournemouth	7m 39s slow
Exeter	14m 14s slow
Worthing	1m 30s slow
Portsmouth	4m 24s slow
Southampton	5m 38s slow

Allow 6 secs per mile E-W from here in the list

Canterbury	4m 18s fast
Maidstone	1m 56s fast
Reading	3m 52s slow
Bristol	10m 28s slow
Cardiff	12m 50s slow
London	0m 37s slow
Southend on Sea	2m 44s fast
Newport	12m 8s slow
Swansea	15m 54s slow
Oxford	5m 6s slow
Chelmsford	1m 46s fast
Haverfordwest	19m 52s slow
Gloucester	9m 8s slow
Luton	1m 46s slow
Ipswich	4m 29s fast
Northampton	3m 42s slow
Aberystwyth	16m 20s slow
Birmingham	7m 39s slow
Peterborough	0m 59s slow
Wolverhampton	8m 37s slow
Norwich	5m 11s fast
Leicester	4m 40s slow
Shrewsbury	10m 60s slow
Nottingham	4m 45s slow
Stoke on Trent	8m 47s slow
Chester	11m 34s slow
Lincoln	2m 8s slow
Holyhead	18m 25s slow
Liverpool	11m 57s slow
Manchester	9m 8s slow
Grimsby	0m 21s slow
Preston	10m 49s slow
Leeds	6m 14s slow
York	4m 24s slow
Lancaster	11m 7s slow
Middlesbrough	5m 0s slow
Penrith	11m 8s slow
Carlisle	11m 49s slow
Newcastle upon Tyne	6m 36s slow

Scotland

Allow 6 secs per mile E-W from here in the list

Stranraer	20m 5s slow
Kilmarnock	17m 56s slow
Glasgow	17m 8s slow
Edinburgh	12m 50s slow
Stornaway	25m 34s slow
Oban	21m 54s slow
Inverness	16m 54s slow
Mallaig	23m 18s slow
Dundee	12m 8s slow
Aberdeen	8m 26s slow
Ullapool	20m 38s slow

Allow 7 secs per mile E-W from here in the list

Kirkwall	11m 51s slow
Lerwick	4m 36s slow

Islands (centres of)

Allow 5 secs per mile E-W from here

Jersey	8m 34s slow
Guernsey	10m 20s slow
Isles of Scilly	25m 14s slow
Isle of Wight	5m 8s slow

Allow 6 secs per mile E-W from here in the list

IoM	18m 14s slow
-----	--------------

Ireland (all)

Allow 6 secs per mile E-W from here in the list

Cork	33m 51s slow
Waterford	28m 39s slow
Wexford	25m 56s slow
Killarney	38m 2s slow
Shannon	35m 30s slow
Galway	36m 23s slow
Dublin	24m 42s slow
Athlone	31m 46s slow
Sligo	33m 55s slow
Armagh	26m 36s slow
Belfast	23m 44s slow
Donegal	32m 42s slow
Londonderry	29m 21s slow

Visit **SunInfo** at www.bit.ly/suninfo

JANUARY 2014						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	



Equation of Time		
Day	Watch	Mins
1	Fast	4
4		5
6		6
8		7
10		8
13		9
16		10
19		11
22		12
26		13

Morning at the Millennium Dial, Barrow-on-Soar. © P Powers 2013.

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FEBRUARY 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

Equation of Time
Day Watch Mins
1 Fast 14
23 13

A National Trust dial - nearly hidden from view © P Powers 2013.

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MARCH 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Equation of Time

Day	Watch	Mins
1	Fast	12
5		11
10		10
13		9
17		8
20		7
24		6
27		5
30		4

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APRIL 2014						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

Equation of Time		
Day	Watch	Mins
1	Fast	4
3		3
6		2
10		1
14	Slow	0
18		1
23		2
28		3

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Equation of Time		
Day	Watch	Mins
1	Slow	3
8		4
20		3
30		2

Time and Tide at St Michael's Mount © P Powers 2013.

MAY 2014						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

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JUNE 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Equation of Time

Day	Watch	Mins
1	Slow	2
6		1
11		0
16	Fast	1
20		2
25		3
30		4

A National Trust dial © P Powers 2013.

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Equation of Time		
Day	Watch	Mins
1	Fast	4
5		5
11		6
24		7
29		6



JULY 2014						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

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Solar Noon, in the Town Square, Amble © P Powers 2013.

Equation of Time

Day	Watch	Mins
1	Fast	6
10		5
15		4
20		3
24		2
28		1
31	Slow	0

AUGUST 2014						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

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SEPTEMBER 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				



Equation of Time

Day	Watch	Mins
1	Slow	0
3		1
6		2
9		3
12		4
15		5
18		6
20		7
23		8
26		9
29		10

OCTOBER 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

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Equation of Time

Day	Watch	Mins
1	Slow	10
2		11
5		12
9		13
12		14
17		15
22		16

NOVEMBER 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						



Day	Watch	Mins
1	Slow	16
15		15
20		14
24		13
27		12
30		11

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DECEMBER 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Equation of Time

Day	Watch	Mins
1	Slow	11
3		10
5		9
8		8
10		7
12		6
14		5
16		4
18		3
20		2
22		1
24		0
26	Fast	1
28		2
31		3

